

This note, from the September 1992 "Business Situation," illustrates how catastrophes are reflected in the national income and product accounts.

Hurricanes Andrew and Iniki

The national income and product accounts (NIPA's) are designed to fully reflect the impact of disasters such as Hurricane Andrew, which hit Florida and Louisiana in late August, and Hurricane Iniki, which hit Hawaii in mid-September. Most of the effects of these hurricanes are reflected in the source data for the NIPA's, and BEA prepares adjustments to certain components to account for the rest of the hurricanes' effects. The effects of these adjustments on personal income and outlays, gross domestic product (GDP), and other NIPA aggregates are described in the following paragraphs; however, BEA will not attempt to quantify the total impact of the hurricanes on these aggregates.⁽¹⁾

Personal income and outlays.--The third-quarter estimates of personal income and outlays will reflect adjustments that were made to the monthly estimates for August and adjustments that will be made to the September estimates.⁽²⁾ (These adjustments are based primarily on preliminary information from an insurance industry trade association and are subject to revision as more complete information becomes available.)

For August, three adjustments were made to personal income and two to personal outlays. In personal income, the largest adjustment was to account for the destruction of residential dwellings and of structures and equipment owned by unincorporated businesses. This destruction of property reduces the rental income of persons and the proprietors' income components to the extent that the property was not insured. BEA has estimated that these uninsured losses reduced rental income of persons by about \$46 billion at an annual rate and proprietors' income by about \$7 billion at an annual rate.⁽³⁾ The second adjustment was to account for the destruction of crops, which reduced farm proprietors' income by about \$2 billion. The third adjustment was to account for work interruptions, which reduced wages and salaries by about \$5 billion. This adjustment was necessary because the regular source data on employment, hours, and earnings are from the Bureau of Labor Statistics monthly establishment survey, which covers the mid-month pay period; thus, for August, these data did not reflect the work interruptions that resulted from Hurricane Andrew. In personal outlays, the property insurance component of personal consumption expenditures (PCE) was adjusted downward by about \$15 billion. This component is defined as premiums less benefit payments, and payments were adjusted upward to reflect insured losses of personal property and motor vehicles. There was also a slight downward adjustment to PCE to reflect lost rental payments due to the destruction of rental and owner-occupied housing units.

For September, further adjustments will be made to personal income and to personal outlays, mainly to account for the effects of Hurricane Iniki. In personal income, rental income of persons and proprietors' income will be reduced to reflect uninsured losses, and farm proprietors' income will be reduced to the extent that the destruction of crops will lower sales in September. In personal outlays, PCE will be adjusted downward to reflect lost rental payments due to the destruction of rental and owner-occupied housing units by both hurricanes. Adjustments for

payments of property insurance benefits will be made only for damages due to Hurricane Iniki; further adjustments for Hurricane Andrew will not be necessary because such benefits are recorded only in the period in which the loss occurs, regardless of when the payments are actually made.

GDP.--The third-quarter estimate of GDP will be affected by the adjustments to PCE described above. In addition, imports of services will be adjusted downward to the extent that domestic insurers have reinsurance policies with foreign insurers. As in PCE, imports of insurance services are defined as premiums less benefit payments. (The adjustments to the insurance services components of PCE and imports are made only to current-dollar estimates; no adjustments are made to the corresponding constant-dollar estimates because these estimates are based only on premiums paid).

Other NIPA aggregates.--The third-quarter estimates of national income, gross national income, and net national product will also reflect adjustments for the two hurricanes.⁽⁴⁾ National income will be reduced by the adjustments, described above, to proprietors' income, rental income of persons, and wages and salaries. In addition, corporate profits will be adjusted downward to account for uninsured property losses and to reflect the payments of all benefits related to hurricane damage, except those reinsured with foreign carriers.⁽⁵⁾ For gross national income, the reductions in business incomes (except for the payments to persons for losses to personal property and motor vehicles and for the amount reinsured abroad) will be offset by an upward adjustment in consumption of fixed capital; this adjustment reflects the writing off of the depreciated (or net) value of plant and equipment destroyed by the hurricanes. Net national product will be reduced by the adjustment to the consumption of fixed capital.

1. For several reasons, it would be very difficult to determine the total impact of hurricanes Andrew and Iniki on the NIPA aggregates. First, most of the effects are embedded in the source data and cannot easily be separated. Second, as in previous disasters, reductions in production and incomes in the areas hit by the two hurricanes may be at least partly offset by increases in production and incomes elsewhere in the United States. Third, production and incomes in the damaged areas may be boosted by subsequent rebuilding efforts.

2. The monthly estimates of personal income and outlays are found on page S-1 of the "Current Business Statistics" section of this issue.

3. All subsequent dollar amounts are also expressed at annual rates.

4. See table 1.9 of the "Selected NIPA Tables" for the relationship between GDP, net domestic product, gross national income, national income, and personal income.

5. As usual, the initial third-quarter estimates of corporate profits--and thus of gross national income and national income--will be released in late November as part of the "preliminary" NIPA estimates.